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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/577,786	BACHMANN ET AL.
	Examiner	Art Unit	
	Ryan D. Coyer	2191	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _15 August 2007_.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-35_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-35_ is/are rejected.

7) ☒ Claim(s) _13, 29_ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _28 April 2006_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☒ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _10/11/2007; 3/6/2009_.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 08-06)   **Office Action Summary**   Part of Paper No./Mail Date 20100930

DETAILED ACTION

This is in response to application 10/577786, filed on 8/15/2007. Claims 1-35 are

pending in the application, of which claims 1, 17, 31, 32, and 35 are in independent

form.

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an

application filed on 10/30/2003. It is noted, however, that applicant has not filed a

certified copy of the application.

Drawings

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this

application because the drawings are blurry and illegible. Applicant is advised to employ

the services of a competent patent draftsperson outside the Office, as the U.S. Patent

and Trademark Office no longer prepares new drawings. The corrected drawings are

required in reply to the Office action to avoid abandonment of the application. The

requirement for corrected drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: there are

multiple tables rendered in grayscale; said tables are blurry and illegible. Appropriate

correction is required.

Claim Objections

Claims 13 and 29 are objected to under 37 CFR 1.75(c), as being of improper

dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s)

in proper dependent form, or rewrite the claim(s) in independent form.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention. The limitation "media according to claim 1" lacks antecedent

basis because claim 1 does not recite "media." Examiner will interpret the instant claim

as if the aforementioned limitation were amended to read "media according to claim 17."

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
conditions and requirements of this title.

Claims 17-30 are rejected under 35 U.S.C. 101 because the claims are directed

to non-statutory subject matter. More specifically, the instant claims are rejected under

35 U.S.C. 101 because the claimed "computer readable media" may be interpreted as comprising non-statutory propagation media. The term "media" is not defined in the specification, and the claim language does not preclude an interpretation of the claimed "medium" as a non-statutory propagation medium. To overcome this rejection, <u>Applicant is directed to amend the instant claims to recite a "non-transitory computer readable medium</u>."

Propagation media (also known as transmission or communication media) includes coaxial cables, copper wires and fiber optics, including the wires that comprise the bus. Propagation media can also take the form of carrier waves, i.e., electromagnetic waves that can be modulated, as in frequency, amplitude, or phase, to transmit information signals. Additionally, propagation media can take the form of acoustic or light waves, such as those generated during radio wave and infrared data communications. Finally, propagation media may be seen, felt, or heard, and therefore may be deemed tangible. As such, the instant claims as written, and when viewed in light of Applicant's specification, are not limited to statutory subject matter and therefore are non-statutory.

<u>Claims 31-35</u> are rejected as being directed toward non-statutory subject matter, namely software per se. The instant claims recite a "system" or "program" that appears to nothing more than a series of software instructions. The claims recite no hardware. <u>Applicant is directed to explicitly recite hardware and a substantial association between said hardware and the claimed "program" or "system.</u>"

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in
public use or on sale in this country, more than one year prior to the date of application for patent in
the United States.

Claims 1-8, 12-24, 28-32, and 35 are rejected under 35 U.S.C. 102(b) as being

anticipated by Beckerle et al., USPAT 6,311,265, hereinafter "Beckerle."

Regarding claim 1, Beckerle anticipates **"[a] method for processing data using

a graphical user interface of a computer system comprising:**

**arranging a plurality of nodes in a graph, wherein each node represents at

least one processing step for processing data by a processor and wherein at

least one of the plurality of nodes comprise at least one data retrieval node for

retrieving data for validation;** (see, e.g., Beckerle, fig. 2A-2B, 36; col. 7 ln. 27 – col. 8

ln. 45; figures 2A and 2B depict a graph in which a plurality of processing steps are

represented by nodes; at least one node represents a data retrieval operation)

**establishing at least one output from substantially all of the plurality of

nodes;** (see *id.*, outward-facing arrow denote output; substantially all of the nodes

produce some sort of output)

**except for the at least one data retrieval node, establishing at least one

input to each of the plurality of nodes;** (see *id.*, figure 2B sec. 116 is input to 100A;

arrows pointing to a node denote output)

configuring one or more parameters of each node; (see, e.g., Beckerle fig. 8A and associated text; ". . . parameters . . .")

linking at least one output of each of substantially all of the plurality of nodes to an input of another node; each link representing a data flow; sequencing a dependency among the plurality of nodes; (see, e.g., Beckerle, fig. 2A-2B, 36; col. 7 ln. 27 – col. 8 ln. 45; ". . . enables the user to entirely define the functional characteristics of a data flow graph . . .") **and**

establishing processing logic in at least one node to process data in a predetermined manner." (see, e.g., Beckerle, fig. 2A-2B; the nodes "Filter-Operational" and "RemoveDuplicatesOperator_1" comprise predetermined data processing logic.)

Regarding claim 2, Beckerle anticipates **"[t]he method according to claim 1, wherein the data retrieval node comprises an inflle node which retrieves data from a particular data file."** (see, e.g., Beckerle, fig. 2B sec. 116; file is read as input.)

Regarding claim 3, Beckerle anticipates **"[t]he method according to claim 1, wherein the data retrieval node comprises a querydump node for retrieving data from a query of a particular database."** (see, e.g., Beckerle, col. 8 ln. 14-24; 45-65; "An RDBMS persistent data set . . . is a table or query in an RDBMS . . .")

Regarding claim 4, Beckerle anticipates **"[t]he method according to claim 1, wherein the data retrieval node comprises a Herefile node for placing data into a graph."** (see, e.g., Beckerle, fig. 2A-2B, 36; col. 7 ln. 27 – col. 8 ln. 45; the graph contains nodes that input data into said graph.)

Regarding claim 5, Beckerle anticipates **"[t]he method according to claim 3,**

wherein the querydump node includes information for identifying the database

and query terms for performing a query on the database." (see, e.g., Beckerle, col.

8 ln. 14-24; 45-65; ". . . system automatically generates a query . . .")

Regarding claim 6, Beckerle anticipates **"[t]he method according to claim 5,**

wherein the querydump node further includes information for accessing the

database." (see, e.g., Beckerle, col. 8 ln. 14-24; 45-65; "Each RDBMS data set has an

associated system object which has members facilitating communication.")

Regarding claim 7, Beckerle anticipates **"[t]he method according to claim 1,**

further comprising executing one or more nodes of the graph-space." (see, e.g.,

Beckerle, col. 7 ln. 23-25; ". . . the system automatically performs parallel execution of

the graph.")

Regarding claim 8, Beckerle anticipates **"[t]he method according to claim 1,**

further comprising executing the graph-space of the workspace according to the

sequence dependency." (see, e.g., Beckerle, col. 7 ln. 20-25; "converts the user-

defined graph into a functionally equivalent graph . . . execution of the graph.")

Regarding claim 12, Beckerle anticipates **"[t]he method according to claim 1,**

further comprising creating a composite node for the graph-space, wherein the

composite node represents a grouping at least a pair of the plurality of nodes."

(see, e.g., Beckerle, col. 8 ln. 6-8; "subgraph composed of one or more other

operators.")

Regarding claim 13, Beckerle anticipates **"[t]he method according to claim 1,**

further comprising setting one or more parameters of one or more of the plurality

of nodes." (see, e.g., Beckerle fig. 8A and associated text; ". . . parameters . . .")

Regarding claim 14, Beckerle anticipates **"[t]he method according to claim 1,**

wherein establishing logic comprises including one or more expressions,

statements, and/or operators." (see, e.g., Beckerle, fig. 2A-2B, 36; col. 7 ln. 27 – col.

8 ln. 45; "operators"; "queries"; queries are equivalents of statements.)

Regarding claim 15, Beckerle anticipates **"[t]he method according to claim 14,**

wherein the statements may be selected from the group consisting of: variable

related statements, output related statements, database related statements,

procedural statements." (see *id.*, a query is a database related statement.)

Regarding claim 16, Beckerle anticipates **"[t]he method according to claim 14,**

wherein the operators may be selected from the group consisting of numerical

operators, logical operators, comparison operators, conditional operators, null

operators, string operators, date and/or time operators, and list operators." (see

id., figure 2B sec. 110B; sec. 114; "BasicStatisticsOperator";

"RemoveDuplicatesOperator.")

Regarding claims 17-24, 28-31 and 35, the scope of the instant claims does not

substantially differ from that of claims 1-8 and 12-14. Claims 17-24, 28-31 and 35

comprise **"computer readable media"**, **"system"**, and **"computer program"** analogs

of method claims 1-8 and 12-14. Accordingly, the rejections of claims 1-8 and 12-14

apply, *mutatis mutandis*, respectively to claims 17-24 and 28-30, and the rejection of

claim 1 applies, *mutatis mutandis*, to claims 31 and 35. With respect to claim 31, which

contains "means" language that invokes paragraph 6 of 35 U.S.C. § 112, Examiner

asserts that the specification does not contain information which could preclude the

present interpretation of the claim.

Regarding claim 32, Beckerle anticipates **"[a] system for processing data**

using a graphical user interface of a computer system comprising:

an editor including a graphical user interface; (see, e.g., Beckerle, fig. 2A-2B,

36; col. 7 ln. 27 – col. 8 ln. 45; figures 2A and 2B depict a graph in which a plurality of

processing steps are represented by nodes; the graph is defined through a graphical

user interface)

a graphical workspace for designing a processing graph having a plurality

of processing nodes; (see, e.g., Beckerle, fig. 2A-2B, 36; col. 7 ln. 27 – col. 8 ln. 45;

figures 2A and 2B depict a graph in which a plurality of processing steps are

represented by nodes; the graph is defined and the nodes are placed by way of a

graphical user interface, which is an equivalent of the claimed graphical workspace)

an execution file, wherein the execution file results from compiling the

processing graph; (see, e.g., Beckerle, col. 7 ln. 20-25; "converts the user-defined

graph into a functionally equivalent graph . . . execution of the graph.") **and**

a controller for directing the running of the execution file on one or more

computers." (see, e.g., Beckerle, col. 7 ln. 23-25; ". . . the system automatically

performs parallel execution of the graph.")

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 9-11 and 25-27 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Beckerle in view of Razdow et al., USPAT 6,330,008, hereinafter

"Razdow."

Regarding claims 9-11, Beckerle anticipates **"[t]he method according to claim**

8," but does not explicitly disclose the limitations **"further comprising color-coding**

the one or more nodes according to a status of the execution of respective node"

and **"wherein the status of the node comprises unprocessed, processing,**

successfully processed and failed processing indicators" and further **"comprising**

displaying results of the graph-space execution." However, Razdow discloses the

subject matter of the aforementioned limitations. (See, e.g., Razdow, col. 12 ln. 1-14;

col. 14 ln. 34-44; col. 2 ln. 33-44; fig. 7 and associated text; "performance monitoring

tool which provides simultaneous visual display of information on the performance of each of a plurality of processes on each of a plurality of processors . . . data flow graph"; "individual processors have different colors"; "user has selected to indicate [ ] blockages by a solid line, preferably of a bright color, to draw attention to the fact that such blockages represent a problem in the computation of the graph.")

Razdow and Beckerle are both directed toward the field of software engineering and therefore are analogous art. At the time of the invention, it would have appeared obvious to one possessed of ordinary skill in the art to combine the color-coding and problem-reporting operations of Razdow with the graph construction method of Beckerle. Such a combination would have been desirable because it would have appeared obvious to one possessed of ordinary skill in the art that color-coding is an effective method of communicating execution status, especially in a graphical context. Accordingly, the instant claims are unpatentable over Beckerle in view of Razdow.

Regarding claims 25-27, the scope of the instant claims does not substantially differ from that of claims 1-8 and 12-14. Claims 17-24, 28-31 and 35 comprise **"computer readable media"** analogs of method claims 9-11. Accordingly, the rejections of claims 9-11 apply, *mutatis mutandis*, respectively to claims 25-27,

Claims 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beckerle in view of Fairweather, USPAT 7,143,087, hereinafter "Fairweather."

Regarding claims 33-34, Beckerle anticipates **"[t]he system according to claim 32"** but does not explicitly disclose the limitations **"wherein the one or more**

computers comprises a server farm" and **"wherein the server farm includes one
or more drones each for operating a process of one or more nodes."** However,
Fairweather discloses the subject matter of the aforementioned limitations. (See, e.g.,
Fairweather, col. 1 ln. 54 – col. 2 ln. 44; "server implementation can be extended in a
hierarchical manner so that each server has a 'drone' server (to any number of levels)
which transparently operate as part of the logical server cluster [i.e., server farm] and
which are tasked by the main server machine . . . the server cluster . . . can be
physically distributed").

Fairweather and Beckerle are both directed toward the field of software
engineering and therefore are analogous art. At the time of the invention, it would have
appeared obvious to one possessed of ordinary skill in the art to combine drone and
server farm components of Fairweather with the parallel processing graph construction
method of Beckerle. Such a combination would have been desirable because it would
have appeared obvious to one possessed of ordinary skill in the art that server farms
are particularly well suited to parallel processing and that drones allow for, *inter alia*,
sub-tasking and/or threading on individual processors within the servers in the server
farm. Accordingly, the instant claims are unpatentable over Beckerle in view of
Fairweather.

Conclusion

The prior art made of record on form PTO-892, 'Notice of References Cited', but
not relied upon in the above rejections, is considered pertinent to applicant's disclosure.

The aforementioned prior art addresses subject matter disclosed in the specification but not necessarily presented in the instant claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RYAN D. COYER, whose telephone number is (571) 270-5306, and whose fax number is (571) 270-6306. The examiner normally may be reached via phone on Mon-Thurs, 9a-8p. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Zhen, can be reached on (571) 272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ryan D. Coyer/
Examiner, Art Unit 2191

/Wei Y Zhen/
Supervisory Patent Examiner, Art Unit 2191